



COLLEGE OF
HEALTH PROFESSIONS

Evidence-Based Practice: Animal-Assisted Therapy and Quality of Life

Zach Fonner and Colton Whitehouse

Practice, Undergraduate, Poster

Purpose: Answer the PICO question of (insert PICO question) and to develop a proposal for change: Answer the PICO question of “In patients with dementia, what is the effect of animal-assisted therapy, in comparison to the standard of care (medications and methods of cognitive therapy), on quality-of-life?”

Design: Evidence-based practice review of the evidence found in literature.

Methods:

Review (list databases) for evidence using the key words of (list key words):

Reviewed Marshall University online library databases including Academic Search Premier, CINAHL Complete, Cochrane Central Register for Controlled Trials, Cochrane Database of Systematic Reviews, and MEDLINE for evidence using the key words of animal, pet, therapy, intervention, quality of life, dementia, QOL, AAI, and AAT.

Findings: (do not put supported; put “the findings answered or did not answer the PICO):

The findings did not definitively answer the PICO question. Nordgren and Engstrom (2013) found that post-intervention QUALID scores increased but no individual measurement within the tool showed significant results. Moretti et al. (2011) found that more than half of patients reported positive effects on a self-administered quality-of-life assessment after pet-intervention. Travers et al. (2013) found mean QOL-AD improved at one facility, worsened at one facility, and showed no change at a third facility. Olsen et al. (2016) found the AAT improved quality-of-life for those with severe dementia but had no effect on those with mild-moderate dementia. Friedmann et al. (2014) found pet-assisted living had positive emotional effects, specifically on depression, versus the control group, but had little to no significant effect on physical or behavioral aspects.

Conclusion: Multiple databases were searched in order to find adequate research regarding animal-assisted-therapy and its effect on demented patients’ quality-of-life. However, after reviewing multiple research articles, insufficient evidence was available to determine the effect animal-assisted therapy has on patients’ quality-of-life. Ultimately, the PICO question was not answered because the articles reviewed provided a large amount of insignificant and contradictory evidence.

Clinical Relevance: Although not enough evidence was found, animal-assisted therapy provides very minimal risk for patients who are receiving this type of alternative therapy. Due to this, implementation could still be utilized for potential benefits. Additionally, further clinical studies need to be conducted to determine the effects of animal-assisted therapy on demented patients’ quality-of-life.



COLLEGE OF
HEALTH PROFESSIONS

The Use of Mechanical CPR versus Manual CPR

Keri Suter & Ian Carle

Practice, Undergraduate, Poster

Purpose:

In victims of sudden cardiac arrest, what is the effect of high quality automatic CPR devices compared to manual CPR on quality of life? The proposal for change should include the automatic CPR device in the emergency department and on crash carts.

Design: Evidence-based practice review of the evidence

Methods:

Review of Marshall University online databases including Academic Search Premier, CINAHL Complete, Cochrane Central Register for Controlled Trials, Cochrane Database of Systematic Reviews, and MEDLINE were used to review evidence using the keywords of QOL (quality of life), cardiac arrest, CPR, manual CPR, automatic CPR, and chest compressions.

Findings:

The findings answered the PICO question. When compared to manual CPR, mechanical CPR showed little difference in patient outcome. The positive aspect of mechanical CPR is that it requires less health care professionals to maintain patient care during the arrest. Also, it allows for exact compression depth. This is important for when professionals cannot perform the needed depth for adequate blood flow, due to fatigue.

Conclusions: Mechanical CPR was very similar to manual in regards to patient outcome; however, it can be delivered without major complications to the patients. Mechanical CPR allows for better patient care by delivering the exact, needed depth of compression, and does not require as many health care professionals compared to manual CPR.

Clinical Relevance: The practice is relevant to clinical practice since it allows health care professionals to see more patients, the mechanical CPR device requires less personnel. It also has relevance to the clinical practice since it can reduce errors in the depth of compressions given to patients.



COLLEGE OF
HEALTH PROFESSIONS

The Effects of Yoga on Chronic Back Pain in Comparison to Standard Medicinal Treatment

Marissa Schott & Mackenzie Caldwell
Practice, Poster, Undergraduate

Purpose: Answer the PICO question of “In patients with back pain what is the effect of yoga in comparison to pain medication on chronic back pain” and to develop a proposal for change.

Design: Evidence-based practice review of the evidence

Methods: Reviewed CINAHL, Pubmed, MU Summon, Academic Search Premier, Health

Source: Nursing/Academic Edition, and MEDLINE for evidence using the key words of Yoga, chronic back pain.

Findings: Based on the evidence reviewed for the purpose of this study, the findings answered the PICO question by revealing there was a relationship with yoga decreasing chronic back pain.

Conclusions: It was determined that yoga is a safe, cost-effective method in treating chronic back pain. The evidence found that people who participate in yoga will show greater improvements than just pain medication, the current standard of care.

Clinical Relevance: Usual care for chronic low back pain typically begins with medication management and self-care instructions, resulting in nonadherence with of the home care regimen and long-term opioid use, which is accompanied by many dangerous side effects. Yoga cannot only relieve pain; Yoga was found to relieve mental health issues that accompany the pain as well. Yoga is a safe alternative for pain management that could be implemented into a rehabilitation treatment for chronic pain and can be recommended by health care professionals.



COLLEGE OF
HEALTH PROFESSIONS

Music Therapy vs. Medication to Decrease Agitation in Patients with Dementia

Raelyn Irick & Caitlin Smith

Practice, Poster, Undergraduate

Purpose: Answer the PICO question of “In patients with dementia, does music therapy in comparison with medication reduce agitation?” and to develop a proposal for change.

Design: Evidence-based practice review of the evidence

Methods: Review MEDLINE, Cochrane Database of Systematic Reviews, Health Source: Nursing/Academic Edition, and CINAHL Complete for evidence using the key words of Music Therapy, Dementia, and

Agitation Findings: Based on the review of the literature, the evidence answered the PICO question. The use of music therapy, in patients with dementia, decreases their agitation.

Conclusions: Two of three articles had supportive findings that music therapy decreased agitation in patients diagnosed with dementia.

Clinical Relevance: According to the evidence, the current standard of care should include some type of music therapy in patients diagnosed with dementia who demonstrate agitation. Music therapy could decrease agitation and the need for medication in these patients diagnosed with dementia.



COLLEGE OF
HEALTH PROFESSIONS

**Quality Improvement: Providing Septic Shock Patients with the Best Outcomes by
Utilizing Septic Shock Bundles
Matthew Ellison & Taylor Pitkin
Practice, Poster, Undergraduate**

Purpose: Answer the PICO question of, “ In patients with severe sepsis/septic shock, what is the effect of sepsis prevention/resuscitation bundles when compared to the use of no bundles in regards to patient mortality,” and to develop a proposal for change.

Design: Evidence-based practice review of literature including a prospective study, prospective observational cohort study, and a quasi-experimental study.

Methods: Review of evidence with key words: CINAHL complete, MEDLINE (Sepsis, bundle, critical, septic shock, mortality, outcomes) ACADEMIC SEARCH PREMIER (Sepsis, bundle, blood diseases, septicemia, mortality) CINAHL complete (sepsis, bundle, steps, prospective study, therapy, compliance)

Findings: The findings answered the PICO question.

Conclusions: Reducing septic shock in patients is a complex process that is constantly evolving to include new interventions in order to significantly reduce mortality in patients. Simplified pathways referred to as “ bundles,” help guide care of septic patients in the health care setting.

Clinical Relevance: Recognizing early signs of septic shock (decreased cardiac output, decreased stroke volume, slightly increased serum lactate, slightly increased serum glucose, decreased oxygen saturation, slightly increased serum creatinine and increased band neutrophils) and intervening early are keys to reducing mortality due to septic shock. Having an evidenced based protocol in place—such as a sepsis bundle—gives nurses a guide for ensuring patients have the best outcomes.



COLLEGE OF
HEALTH PROFESSIONS

Breastfeeding as Pain Relief Intervention for Infants
Erinn Rodriguez and Emily Heniken
Practice, Poster, Undergraduate

Purpose: The purpose of this paper is to research and review the effectiveness of breastfeeding as a method of pain relief in infants during painful procedures such as immunizations, and synthesize the evidence in order to provide the best possible care for patients. In infants, what effect does breastfeeding during painful procedures have compared to infants who are not breastfed on pain?

Design: Evidence-based practice review of the evidence One of the selected research studies were categorized as true experimental design, while the other two research studies were randomized clinical trials.

Methods: Evidence to correlate with the proposed PICO question was located using multiple databases through the MU library, including PubMed, Academic Search Premier, and CINAHL. Key words searched included breastfeeding, pain relief, painful procedures, and immunizations.

Findings: The literature findings did in fact answer the proposed PICO question. Based upon the evidence findings from the selected literature, breastfeeding does have a positive effect on pain relief felt by infants during painful procedures.

Conclusions: The effectiveness of breastfeeding in pain relief is a highly researched topic today and the findings from particular research studies yield important implications for nursing practice.

Clinical Relevance: Further exploring this issue and determining whether breastfeeding can in fact serve as a non-pharmacologic method of pain relief in infants during painful procedures is important because it can help establish new practices in nursing in the future.



COLLEGE OF
HEALTH PROFESSIONS

A Patient Perspective on Patient-Provider Communication during Pulmonary Rehabilitation: Insights for Provider Counseling Strategies

Lauren Bartoldson

Practice, Graduate, Oral

Purpose: To assess patient-provider communication strategies on patient motivation, self-efficacy for exercise and satisfaction with a pulmonary rehabilitation maintenance program.

Design: Qualitative Analysis using an individual clinical case

Methods: A stage 4 COPD patient presented to Cabell Huntington Hospital's Pulmonary Rehabilitation Maintenance Program in 2014. From 2014-2015, traditional protocol consisted of exercise supervision with general advice given reactively by providers. From January to April 2016, a proactive approach was adopted where providers assess patients and help develop continued goals based on individualized needs and barriers. Following consultation, a new exercise program was prescribed that included home-based regimens. Tri-weekly supervision and home-based evaluations were agreed upon for accountability and motivation. A Likert survey was administered to assess traditional versus new counseling on program satisfaction, patient motivation and self-efficacy for exercise [1= poor; 2= below average; 3= average; 4= above average; 5= excellent].

Findings: Patient reported increased motivation and self-efficacy with new care versus traditional care (5 vs. 1) and (5 vs 3), respectively. An increase in program satisfaction with new care compared to traditional care (5 vs 4) was also reported. When asked why, the patient expressed greater provider encouragement, accountability and confidence. These outcomes have enhanced the patients weekly exercise duration and other health outcomes.

Conclusions: Proactive approaches to goal setting and patient follow up improved the patient's perspective of herself and the exercise maintenance program.

Clinical Relevance: Cardiopulmonary rehab clinics may benefit from initial consultations of continued goals and individualized programming upon patient transition into a health maintenance program.



COLLEGE OF
HEALTH PROFESSIONS

Yoga Meditation Therapy to Improve Management of PTSD in Veterans
Stacie Daniel and Jerry McComis
Practice, Poster, Undergraduate

Purpose: Answer the PICO question of: In veterans, what is the effect of yoga meditation compared to psychiatric medication for PTSD management?

Design: Evidence-based practice review of the evidence Review of up to date research providing evidence to answer the PICO question. Types of research reviewed: quantitative, level II.

Methods: Review (list databases) for evidence using the key words of (list key words) Academic Search Premier was utilized for searching up to date research. Key words including: PTSD, veteran, meditation, mindfulness, yoga meditation, and mindfulness-meditation.

Findings: The research findings answered the PICO question. The findings from the literature showed that yoga meditation has a positive effect on Veterans diagnosed with Post Traumatic Stress Disorder.

Conclusions: The findings in the literature showed a positive effect of practicing meditation on Veterans diagnosed with PTSD versus those who are only treated by psychiatric medications. More research is needed for more conclusive evidence.

Clinical Relevance: Healthy People 2020 states that veterans who have experienced physical and mental trauma are attributing to new mental health issues on the rise. The evidence of the research studies supports that yoga meditation therapy significantly decreases PTSD symptoms in Veterans. Effectively managing symptoms of PTSD such as anxiety and depression through music therapy can be more cost effective and more beneficial to the patient and the hospital.



COLLEGE OF
HEALTH PROFESSIONS

Treatment For Sustained Concussion Symptoms Through Vestibular Rehabilitation
Jacob Brown and Garrett Wireman
Practice, Undergraduate, Oral

Objective: Locate and analyze the data supporting or refuting vestibular rehabilitation for patients suffering from concussion symptoms affecting the vestibular systems. **Design:** Utilized a literature review approach.

Methods: Literature obtained using the terms in the search strategy were 'Vestibular rehabilitation' OR 'Mild traumatic brain injury' OR 'Concussions' OR 'Vestibular systems' AND 'brain injury'. To identify papers, electronic databases were searched: Ebscohost, PubMed, Google search engine, Google Scholar, and Academic Search Premier. The population for this research included 279 patients. The population's age ranged from 8 to 73 years old.

Results: The research found nystagmus was decreased from 63% to 33% during therapy, dynamic visual acuity increased from -4.81 to -2.67, and dynamic gait increased by 11%. Sway monitoring on an unstable surface with eyes open improved mean test scores from 37.25 to 72.50. Speed performance times were cut from a mean of 22.6 to 13.3 seconds. Patients described a decrease in dizziness from 2.6 to 1.3 on an average rating of dizziness scale (0-4).

Conclusion: Based on the research analysis, it was concluded that vestibular rehabilitation is effective in decreasing vertigo and dizziness via restoration, adaptation, and habituation of the vestibulo-spinal and vestibulo-ocular units.

Clinical Relevance: Research expressed vestibular rehabilitation may lead to better outcomes and improving return to play for patients suffering from concussions or mild traumatic brain injuries. Combating dizziness and vertigo quickly will aid in all aspects of concussion rehabilitation.



COLLEGE OF
HEALTH PROFESSIONS

**Incorporating Treatment with Buprenorphine in Comparison with Methadone
Management in Neonatal Abstinence Syndrome Symptoms**

Carol Lane and Christina Nagel

Practice, Undergraduate, Poster

Purpose: Opioid dependency is a growing problem in the United States and more and more women are giving birth to opiate-addicted infants. In neonates, does treatment with Buprenorphine in comparison with methadone manage Neonatal Abstinence Syndrome (NAS) symptoms more effectively immediately following birth? The purpose of this study is to determine if treatment of the infant with Buprenorphine instead of Methadone presents less harm to the neonate with Neonatal Abstinence Syndrome (NAS), postpartum. The answer is that it does.

Design: Evidence-based practice review of the evidence- found in literature reviews

Methods: A review using Marshall University's Library database was conducted where 3 research articles were found using the keywords: Buprenorphine, opioid addiction, neonates, Neonatal Abstinence Syndrome

Findings: In the first study, Kraft (2011) identified there is a lack of evidence to determine whether using buprenorphine would be more beneficial than using oral neonatal opium solution (NOS), but is critical to continue research to explore the effectiveness of buprenorphine in the treatment of neonatal abstinence syndrome. The second study was a meta-analysis that focused on the review of two studies, which identified buprenorphine had positive effects on infants with NAS. Bell (2012) evidence supported buprenorphine to be more effective when compared to morphine with duration of stay and drug therapy. The final study analyzed concluded buprenorphine was a reasonable alternative for a child with NAS and stated there is a growing amount of research, which supports the safety of Buprenorphine (Hall, 2016).

Conclusion: Buprenorphine has been seen as an effective drug in the withdraw of opioids in neonates, but more studies must be done to see if it is as effective as the standard treatment, methadone.

Clinical Relevance: Due to the high prevalence of opioid dependence, it is imperative for medical professionals to work together and discover the safest and most effective treatment for the infant experiencing withdrawal symptoms related to NAS.



COLLEGE OF
HEALTH PROFESSIONS

Physical Performance Training for Stage Combat in the Performing Arts.

Branch, M. Holmes, A., Perry, H., Morgan, S., Somerville, C., Riley, E., Morrison, D. Wireman, G.

Research, Graduate, Oral

Purpose: The purpose of this study was to determine the effects high intensity training on performance constructs related to swordfighting stage combat for artists acting in a Romeo and Juliet production.

Design: A repeated measures design was employed to assess the performance constructs of VO₂max, leg power, body composition, agility, neuromuscular reaction, functional movement, balance, strength, and explosive power after 4 weeks of high intensity physical training.

Methods: Six actors participated in a 4 week high intensity training program designed to improve multiple performance constructs related to swordfighting activities. Body composition was measured using plethysmography (Bod Pod), hand grip strength was measured using a Lafayette Hand Dynamometer, hand reaction, sword reaction, and 5-10-5 shuttle times were measured using a FitLight reaction timing system. Vertical jump was measured using a Vertec, balance was measured using a Stabilometer, postural control was measured using the Star Excursion test, upper body strength was measured using 5RM bench press, aerobic metabolism was measured by a VO₂ max test using a 2400 True One Par Medics metabolic cart, and anaerobic power was measured using a 15s Wingate protocol on Lode electrically braked bike. Data were analyzed using a MANOVA for repeated measures to determine differences between multiple performance parameters.

Findings: BF% Pre 14.56+/-1.72 kg, Post 15.06+/-1.85 kg; Grip Strength (right hand) Pre 43.83+/-9.92 kg, Post 50.05+/-7.61 kg; VO₂ maxPre 42.06+/-6.51 ml/kg/min, Post 45.52+/-5.12 ml/kg/min; Wingate:PP Pre 851.33+/-226.12 watts, Post 861+/-22.38 watts; RPP Pre 11.88+/-1.43 watts, Post 11.99+/-1.67; MP Pre 695.84+/-181.10 watts, Post 719.18+/-184.84 watts; RMPPre 9.71+/-1.08 watts, Post 10.33+/-1.16 watts, %PD Pre 33.56+/-10.33 watts, Post 30.62+/-11.34 watts; Functional Postural ControlPre Right 76.28+/-11.40 cm, Post Right 88.15+/-8.40 cm; Pre left 77.31+/-9.69 cm Post Left 89.87+/-7.57 cm; Vertical Jump Pre 21.08+/-4.14 in, Post 27.6+/-11.22 in; Bench Press Pre 48.94+/-17.47 kg, Post 51.9+/-18.2 kg

Conclusions: A four week High Intensity Training (HIT) program significantly improved several physical performance constructs specifically related to stage combat swordfighting.

Clinical Relevance: Stage combat performance may significantly improve if actors physical engage in a short-term performance training program prior to opening performances.



COLLEGE OF
HEALTH PROFESSIONS

The Effects of Preoperative Play On Anxiety in Children

Amanda Dunbar and Chelsea Somerville

Practice, Undergraduate, Poster

Purpose: Answer the PICO question of “In children undergoing surgical procedures, what is the effect of play in comparison to standard of care (no play time) on preoperative anxiety?” and to develop a proposal for change in children undergoing surgical procedures, the effect of play in comparison to standard of care in preoperative anxiety is reduced anxiety. The standard of care at this time is no preoperative playtime. The purpose is to raise awareness that preoperative play should be implemented for children.

Design: Evidence-based practice review of the evidence all studies used showed high validity, reliability, and stability. Each study was clinically significant. Two studies used the State Anxiety Scale for Children, and one study used the modified Yale Preoperative Anxiety Scale. In one study, 21 children in the control group had anxiety, while only 2 children in the recreation group were anxious.

Methods: Review CINAL and MEDLINE for evidence using the key words of preoperative play, anxiety, and children.

Findings: The findings answered the PICO question of “In children undergoing surgical procedures, what is the effect of play in comparison to standard of care on preoperative anxiety?” The use of preoperative play for children significantly reduced anxiety.

Conclusion: Preoperative play significantly reduces anxiety in children and should be implemented for all children an hour before invasive procedures.

Clinical Relevance: The clinical relevance of this study is that allowing time for children to play before their operative procedure will reduce their feelings of anxiety. This issue is important for nursing practice because the nurse spends significant time with the patient before the procedure. The nurse is the person who will most likely initiate this intervention and reduce anxiety to provide a safer overall experience for the child. The implication for nursing practice is that allowing playtime for children will significantly decrease their feelings of anxiety.



COLLEGE OF
HEALTH PROFESSIONS

Title: Change Proposal Of Co-sleeping and Sudden Infant Death Syndrome
Emily Deitsch & Austin Newsome
Practice, Undergraduate, Poster

Purpose: The purpose of this paper is to answer the PICO question, “in infants, what is the effect of co-sleeping in comparison to sleeping alone on SIDS”, and to develop a proposal for change.

Design: Evidence-based practice review of the evidence found in literature

Methods: Review research articles in the databases at Marshall University, such as EBSCOhost, for evidence using the key words, co-sleeping and sudden infant death syndrome. The findings did answer the PICO question.

Conclusions: Since the findings answered the PICO question clearly, it was found that co-sleeping should not occur in order to prevent SIDS. After the review of the literature, evidence shows that co-sleeping increases the likelihood of SIDS, and should be discouraged to new parents.

Clinical Relevance: The findings in this review will help nurses when educating patients about co-sleeping and SIDS. This will lead to a decrease in SIDS rate and improved safety for infants.



COLLEGE OF
HEALTH PROFESSIONS

Knowledge of Speech-Language Pathology among College Students at Marshall University
Morgan Chandler, Rebecca Sanders, Amber Stone, & Lauren Daniel
Research, Undergraduate, Poster

Purpose: To assess college students' knowledge of speech-language pathology (SLP) at Marshall University.

Design: A survey was developed, using both quantitative and qualitative questions, to assess students' knowledge of SLP.

Methods: An online survey was created and disseminated via SurveyMonkey. Inclusion criterion consisted of: enrollment at Marshall University, and over the age of 18. Participants received a recruitment letter and invitation link via email.

Findings: Results showed SLPs are most commonly known for their treatment of speech disorders, with few recognizing the treatment of language disorders, and even less aware of the responsibility of SLPs to treat swallowing disorders. Few participants demonstrated awareness of SLPs responsibilities in regards to diagnosis. Findings also indicated that as experience with SLPs increases, the knowledge of an SLP's scope of practice also increases. Findings appeared to be heavily influenced by students' academic level, major, and understanding of the profession from personal experience.

Conclusions: Marshall University students' understanding of SLP and opinions on future collaborations support that nursing students are being educated with collaborative goals in mind. The survey revealed the need for other students to improve their understanding of SLP and future collaboration, as SLPs collaborate with a multitude of professions.

Clinical Relevance: Students at Marshall University may improve their overall competency if an undergraduate collaboration initiative was created in addition to the current graduate IPE series. Students studying education and health professions are expected to collaborate with one another in their respective work environments; therefore, their education should implement preparation for inter-professional collaboration.



COLLEGE OF
HEALTH PROFESSIONS

**An Ultrasonographic Analysis Of The Structures Of The Subacromial Space, As They
Relate To The Postures Of Upper Strings Musicians**

Elliot Smithson

Research, Graduate, Poster

Purpose: Many musicians end their musical career due to shoulder pain, however the mechanisms leading to the shoulder pain of upper strings musicians are not well known. RCD results from an overload of the soft tissues of the subacromial space, resulting from changes in the dimensions of the subacromial space. The purpose of this study was to characterize the AHD measurement of the left and right shoulders of upper string musicians while in standard playing positions.

Design: Descriptive study **Methods:** Experienced musicians were recruited from the University and local communities. Ultrasound images of the participant's shoulders were collected using standard imaging techniques.

Findings: On the right side, the arm position's main effect was significant ($p < 0.001$), the AHD in the 4th string position (8.81.9mm) was less than the 1st string (11.31.4mm) and resting (11.71.3mm) positions. There was no difference in the AHD between the resting (10.6 5.8mm) and the 1st finger, 1st string (10.61.5mm) positions in the left side. The resting AHD was smaller ($p = 0.04$) on the right side compared to the left (12.21.4). There were no side differences found in tendon thickness. There was not a statistically significant difference ($p = 0.138$) in the occupation ratio between the right (mean=0.543±080) and left side (mean=0.510±087).

Conclusions: The AHD measure decreases with increased arm elevation associated with standard playing positions.

Clinical Relevance: Treatment that help the musician maximize the width of their subacromial space might help reduce the prevalence of shoulder pain in this population.



COLLEGE OF
HEALTH PROFESSIONS

Evidence-Based Practice: Effect of Music Therapy vs. Narcotic Pain Medication on Postoperative Pain

Brooke Adkins & Allison

Research, Undergraduate, Oral

Purpose: Answer the PICO question of In cardiac surgical patients, what is the effect of music therapy compared to narcotic pain medication on postoperative pain?

Design: Evidence-based practice review of the evidence found in the literature

Methods: Review (list databases) for evidence using the key words of (list key words) Marshall Library Databases: MEDLINE, CINAHL complete, EBSCOhost, and Nursing and Allied Health
Key words: Music therapy, pain, and cardiac surgery

Findings: (do not put supported; put “the findings answered or did not answer the PICO) The findings supported the PICO question

Conclusions: After critically appraising the evidence and analyzing the results, evidence proved that music therapy does significantly decrease post-operative pain levels in patients who underwent cardiac surgery.

Clinical Relevance: The evidence of the research studies supports that music therapy significantly decreases pain in cardiac surgical patients. These changes can be implemented by simply educating the hospital staff and patients about the benefits of music therapy. Effectively managing pain through music therapy can be more cost effective and more beneficial to the patient and the hospital.



COLLEGE OF
HEALTH PROFESSIONS

A Case Study on Cardiopulmonary Rehab Patient: Effects of an 8 Week Resistance Training Program on Body Composition

James Ryan Charley

Practice Undergraduate Poster

Purpose: Resistance training has been shown to improve physical function and body composition (BC) in older adults participating in Cardiopulmonary Rehabilitation. However, many older adults do not engage in resistance training. The purpose of this study was to examine the addition of resistance training to an aerobic training regimen on improvement in strength and body composition.

Design: A prospective study.

Methods: A male patient participating in phase 3 of cardiopulmonary rehab (70 yrs, BMI 34 kg/m², Weight 222lbs, fat mass 92.4lbs; waist circumference (WC) 45.5inches)) presented with a goal to lose weight and increase strength. Patient stated that he reached a plateau in strength and weight loss with his current aerobic regimen and was seeking advice. An addition of an 8 week resistance training program involving 11 exercises targeting the upper and lower body, 2-3 sets at 8-12 repetitions was prescribed in addition to his current aerobic regimen. A 6 repetition test for strength was evaluated pre and post program as well as BC using BodPod™.

Findings: After the 8 week RT program 6-RM strength increased in all of the tests performed. There was an average strength gain of 19lbs. Anthropometric measures showed decreases in weight (222lbs to 216.6lbs), BMI (34 kg/m² to 33 kg/m²), fat mass 92.4 to 88.6lbs and WC (45.5 to 41.5 inches).

Conclusions: The addition of an 8 week RT program can improve strength and body composition in phase 3 cardiopulmonary rehab patients.

Clinical Significance: Improving strength and body composition in older adults with cardiopulmonary conditions improves overall quality of life.



COLLEGE OF
HEALTH PROFESSIONS

The Impact of Cardiopulmonary Rehabilitation on Functional Quality of Life: A Case Study Analysis on the Reduction of Supplemental Oxygen following Exercise

Julia Galloway

Practice Undergraduate Poster

Purpose: Cardiopulmonary Rehabilitation (CR) is a 3-phase program to improve cardiovascular (CV) and pulmonary (PM) disease outcomes. Despite the evidence-based improvements, referrals by physicians remain low. The purpose of this case study is to demonstrate the impact of physician referral on patient outcomes following a phase 2, CR program delivered at Cabell Huntington Hospital.

Design: Retrospective Data Analysis

Methods: Collection of retrospective data for a CR patient who completed all phases of the program. Exercise prescription, vital assessments, and pre and post-six minute walk test (6MWT) were collected for the patient.

Findings: Caucasian Male (Age: 72; 197lbs; 71 inches) presented to CR requiring supplemental oxygen (3 Liters continuous flow) pre/during/post exercise to maintain SaO₂ levels >93%. Remarkably, the patient was able to complete all posttests without supplemental O₂, while yielding similar SaO₂ levels (>93%) versus pretests completed with continuous O₂. Following the program, the patient sustained pretest vitals (HR: 93bpm; BP:112/70; SaO₂: 93%) with room air. A clinically significant increase in 6 MWT distance was found (pre: 1035ft.; post: 1380ft.). Also posttest scores on dyspnea (3/4 to 2/4) and rate of perceived exertion (6/10 to 5/10) scales improved compared to baseline.

Conclusions: The results for the CR patient indicate that CR does aid in improving vitals, cardiorespiratory capacity, and prevents worsening of CV and PM disease for those who complete a physician-referred program

Clinical Relevance: This analysis demonstrates the importance of physician support and referral for rehabilitation programs that can better the quality of life for those with CV and PM disease.



COLLEGE OF
HEALTH PROFESSIONS

When are Cognitive Differences a Concern?

Jennifer Pruett, Haley Angel, Kelsey Higgins Alyssa Woodrum

Practice Undergraduate Poster

Purpose: This study was conducted to see how well individuals are able to discern when given situations are a cause for concern or not a cause for concern in regard to cognitive abilities.

Knowing what gaps people have in their knowledge will allow for education on normal aging versus red flags for cognitive dementia.

Design: A fourteen scenario anonymous survey, distributed via Facebook and email, was used to collect the data.

Methods: To measure the public's knowledge of the aging process, a survey of 14 questions was distributed to the public via e-mail and Facebook. The survey was designed to take no longer than 10 minutes and the individuals who took the survey completed an informed consent form.

Findings: The need for public education is evident. Individuals struggle to identify early signs cognitive impairment which in turn results in late diagnosis.

Conclusions: Recognizing red flags of cognitive impairment will make early intervention possible. It can be difficult to differentiate between normal cognitive decline in an aging individuals and cognitive impairment. Our survey results indicate a need for education on both normal cognitive decline with aging and cognitive impairment.

Clinical Relevance: This study concluded that the general population is not properly educated on the early signs of cognitive impairment. It is increasingly evident that cognitive impairment is a non-discriminating widespread occurrence. As far as clinical practice, this study sheds light on the importance of education and awareness for cognitive disorders.



COLLEGE OF
HEALTH PROFESSIONS

Music Therapy for Patients with Dementia
Taylor Thompson/Jeremy Kilgore
Practice Graduate Oral

Purpose: The purpose of this paper is to discuss a need for change in the standard of care for reduction of aggression in patients with dementia by utilizing music therapy. This proposed change will be discussed within the concepts of Lewin's Theory of Change, proposing a solution and steps involved. A PICO question was formed: In patients with dementia, what is the effect of music therapy, in comparison to pharmaceutical use and performance of general activities, on aggression?

Design: This change proposal paper will analyze five separate quantitative research articles. These results and their impact on the proposed change will be discussed in relation to Lewin's Theory of Change.

Methods: The Marshall University Library online database system was used when searching for research, more specifically using Academic Search Premier, Health Source: Nursing and Academic Edition, PsychINFO, PsychARTICLES, CINAHL Complete, and MEDLINE. Keywords used to find applicable research were: music, music therapy, nursing, intervention, agitation, aggression, and dementia.

Findings: The PICO was answered with evidence from five research studies, with the results of each integrated into the discussion for change. Music therapy was shown to reduce aggression in patients with dementia.

Conclusion: This data supported intervention could play an important role in nursing care of patients with dementia by reducing patient aggression, improving patient happiness and quality of life, and reducing costs of treatment for facilities, patients, and patient families.

Clinical Relevance: This proposed change advocating for the implementation of music therapy applies to a large percentage of nurses worldwide. This new intervention is especially relevant as many nurses provide care on a daily basis to patients with dementia.



COLLEGE OF
HEALTH PROFESSIONS

Analyzing Video Gaming on Pain Distraction in Children Undergoing Painful Medical Procedures

Lindsay Weddington and Montana Wamsley
Resesarch, Graduate, Oral

Purpose: Answer the PICO question of “In children undergoing painful medical procedures, what is the effect of video gaming on pain distraction compared to using pain medication, standard protocol for pain management, and passive distraction?” and to develop a proposal for change. The change that is being proposed is to offer video gaming as a distraction technique for children that are undergoing dressing changes or performing range of motion.

Design: Evidence-based practice review of the evidence Found in literature

Methods: Review EBSCOhost, ScienceDirect, and PubMed for evidence using the key words of “video games”, “pain distraction”, and “children with burns.”

Findings: The findings answered the PICO question.

Conclusion: It was revealed that implementing the use of video games as a form of pain distraction during wound dressing changes and performing range of motion as opposed to the standard treatment assisted with reducing pain in children.

Clinical Relevance: Nurses want to make pediatric patients as comfortable as possible while they are in the hospital. It is prudent to exhaust every possibility to ease the patient's mind when facing a troublesome procedure or situation. These patients will not require as much pain medication, and the patients can look forward to playing a game to distract their pain.